UNDERSTANDING COMMUNITY HEALTH NEEDS IN IOWA

AN IMPORTANT STEP IN MAKING IOWA THE HEALTHIEST STATE IN THE NATION.

CHNA & HIP

Community **H**ealth **N**eeds **A**ssessment
& **H**ealth **I**mprovement **P**lan

2010-2011

IDPH

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Public Health Colleagues and Partners:

Understanding community health needs is a vital component of improving health in Iowa. Community health needs assessment and planning serves as a foundation for statewide health planning to promote and protect the health of Iowans. This report presents an analysis of community health needs and identifies the most critical health needs facing Iowa's communities.

The Iowa Department of Public Health commends local public health agencies for their work in assessing community health needs and for their commitment to improving health in their communities. It is extremely important to have input from people who provide direct services when planning statewide health activities . This report is a step toward making sure local partners have their voices heard as we advance public health in Iowa.

While there still is considerable work to be done to improve the health of all Iowans, the community effort reflected in this report is a fundamental piece of making **Iowa the healthiest state in the nation**.

Sincerely,

Dr. Marianette Miller-Meeks

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EXECUTIVE SUMMARY

In 2010 and 2011, Iowa's 99 counties successfully completed a comprehensive analysis of their community health needs, prioritized which needs would be included in a health improvement plan, and submitted this information to the Iowa Department of Public Health (IDPH). This process known as the Community Health Needs Assessment and Health Improvement Plan (CHNA & HIP), has more than a 20 year history and is a vital component of public health in Iowa. The CHNA & HIP process serves as a foundation for health planning in the state and subsequently, public health's ability to improve the health of Iowans.

IDPH has enhanced the CHNA & HIP process this year by offering a more streamlined process and additional technical assistance. The 2010-2011 CHNA & HIP marks the first time a comprehensive analysis has been done of all the county needs assessments at IDPH. The goal of this comprehensive analysis and report on the needs assessments is to provide a basis for understanding what health needs are most critical in the state, what needs are emerging, and what needs are not being addressed at the local level.

In this installment of CHNA & HIP, the counties identified 1,240 needs in total and 497 of those needs are being addressed through health improvement plans. This leaves 60 percent of the identified needs unaddressed by local public health agencies and their community partners. Counties cited multiple reasons for not identifying needs; however, a lack of human and financial resources emerged as a common theme.

With more than half of the needs remaining unmet, it is apparent that there is much work to be done in public health. The breadth and scope of unmet needs signals that opportunity for collaboration exists to tackle health issues that local public health agencies didn't address in the 2010-2011 round of health improvement planning.

Categorizing the health needs identified in needs assessments by Iowa's counties is a challenging task. Many health needs are interrelated and crossover the focus areas of public health as well as IDPH programmatic efforts, making natural categorical boundaries difficult to define. To counteract this, the analysis uses multiple levels of categorization. The broadest layer is categorization by IDPH focus area. The six focus areas and their short titles are:

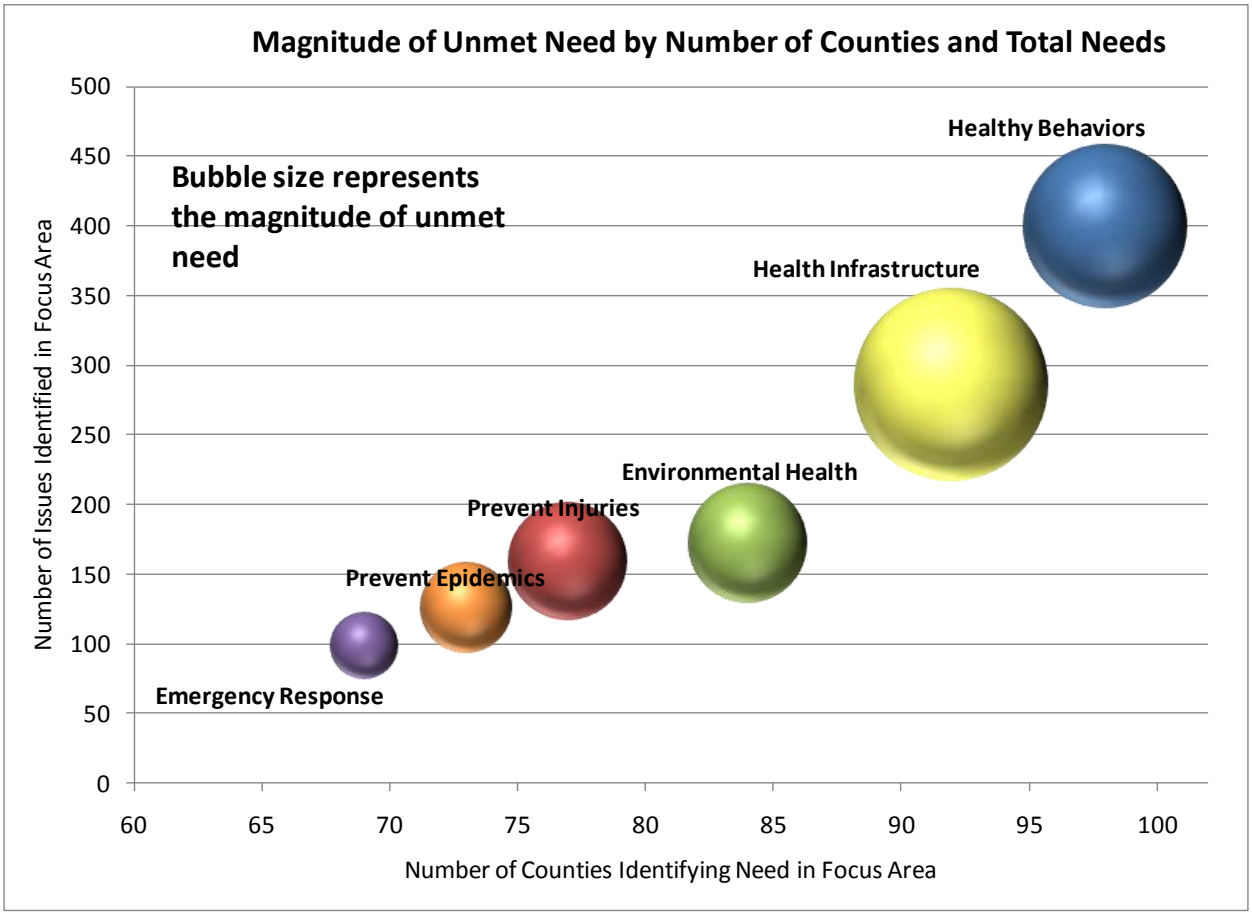
- Promote Healthy Behaviors (Healthy Behaviors)
- Prevent Injuries
- Prepare for, Respond to, and Recover from Public Health Emergencies (Emergency Response)
- Protect Against Environmental Hazards (Environmental Hazards)
- Prevent Epidemics and the Spread of Disease (Prevent Epidemics)
- Strengthen the Public Health Infrastructure (Health Infrastructure)

In order to make state planning compatible with national health planning and the objectives set forth in *Healthy People 2020,* subsequent categorization of health needs uses *Healthy People 2020* categories. These categories help define the breadth or scope of health issues in Iowa. Within these *Healthy People 2020* categories, specific needs are identified. These specific needs help provide a basis for understanding which health issues are most acute and which are most pervasive throughout Iowa.

At the focus area level, Healthy Behaviors was the most cited with every county identifying a need in this area. Thirty six percent of all needs identified in the CHNA & HIP process fall under the Healthy Behaviors focus area. The second most frequently cited focus area was Health Infrastructure, identified by 93 counties and representing 19 percent of the total needs identified. Counties included 57 percent of Healthy Behaviors' needs in their HIP, but only 35 percent of needs from Health Infrastructure.

The number of issues in these focus areas varied as did the number of needs remaining unmet. When the focus area is weighted by the number of unmet health needs, it is clear that Health Infrastructure has the greatest outstanding need after CHNA & HIP with Healthy Behaviors ranking second. Figure 1 illustrates the unmet need within IDPH focus areas by the number of counties identifying the focus area and the total needs within the focus area.

Figure 1. Focus Area Unmet Need by Number of Counties and Total Needs



Analyzing needs in the context of *Healthy People 2020* categories reveals the breadth of health needs in Iowa. The category of Access to Health Services was cited by 92 counties followed by Maternal and Child Health and Environmental Health, cited by 87 and 83 counties, respectively. Within these categories, multiple needs were cited by the counties. Access to Health Services needs averaged 2.11 per assessment and Environmental Health averaged 1.65 needs per assessment. Maternal, Infant, and Child Health led all categories in needs per assessment at 2.41.

The intersection between Access to Health Services and many of Iowa's other health needs reflects its importance in the needs assessments as reflected by its frequency of identification. The magnitude of needs in the Maternal, Infant, and Child Health category reflects its intersection with other focus areas but more importantly, the consistent concentration on youth common in the health needs assessments. Whether concentrating on youth as a strategy to address a health need or targeting youth as an at-risk population, the needs assessments demonstrated concern with youth over other population groups.

Within the *Healthy People 2020* categories, analysis of specific needs cited by Iowa's counties indicates there is a strong commonality in needs across the state. The top need cited in the assessments is obesity, cited by 74 counties. The next most frequently cited needs were access to transportation and water quality, cited by 41 counties in a needs assessment. Table 1 details the 10 most frequently cited needs in the CHNA & HIP process.

Table 1. Top 10 Health Needs Identified in CHNA & HIP process

Health Need	Focus Area	Number of Identifying Counties	Number of Counties Addressing Need
Obesity and Overweight	Healthy Behaviors	74	63
Access to Transportation	Health Infrastructure	41	7
Water Quality	Environmental Health	41	10
Motor Vehicle Accident Prevention	Prevent Injuries	36	6
Access to Mental Health Services	Health Infrastructure	35	16
Cancer	Healthy Behaviors	35	20
Youth Substance Abuse	Healthy Behaviors	32	24
Educational and Community Based Programs	Health Infrastructure	32	24
Lead Poisoning and Screening	Environmental Health	32	14
HIV/STD Prevention, Screening, and Treatment	Prevent Epidemics	31	8

The inclusion of these needs in local health improvement plans demonstrated significant disparity. For example, 63 of the 74 counties identifying obesity as a need included strategies to address it in their health improvement plan. In contrast, only 7 of the 41 counties identifying access to transportation as a need included strategies to address it in their HIP. The percentage of counties

addressing the same need ranged from the high, 85.1 percent for obesity, to the low, 16.7 percent for motor vehicle accident prevention.

The needs that remain unaddressed across the state require further analysis and consideration. These needs may require partnership with other state agencies, as access to transportation and motor vehicle accident prevention illustrate. The unmet needs may also require other approaches, such as leveraging community partnerships or increasing public education. A number of the unmet needs may reflect a lack of funding or human resources, signaling that solutions may involve a reallocation of resources, both human and financial.

The size and location of a county did have a bearing on the identification of needs across the state. Metropolitan counties were more likely to identify child abuse and safety as a need. Child abuse and safety illustrated a perfectly negative linear relationship between county size and location and the likelihood it was identified as a need. In other words, the greater the distance from a metropolitan area and the less populated the county, the less likely it is that child abuse would be identified as a need. Micropolitan counties were more likely to identify family planning as a need and rural counties were more likely to cite motor vehicle accident prevention and water quality as needs. More analysis and research is needed in this area as the types of interventions and policies to address needs might vary based on the demographics and location of a county.

The analysis suggests that there are a number of health issues, such as obesity, that are prevalent in Iowa and are also receiving considerable attention from local public health agencies. There are also a number of issues that aren't being addressed and a number of issues that are emerging and require monitoring in the five years between CHNA & HIP installments.

The CHNA & HIP needs will be incorporated into the statewide needs assessment and planning process known as *Healthy Iowans* and will provide the foundation for the statewide approach to improving health outcomes for Iowans. In addition, over the next five years, local public health will continue to monitor their needs and assess their progress in meeting the needs they included in their HIP. The interventions and strategies utilized in communities across the state can be shared with those communities who might not have addressed a need in this CHNA & HIP. The sharing of best practices and dissemination of information through the state health improvement plan will serve to empower communities and partners to take action against health issues and improve health outcomes.

INTRODUCTION

In 1986, the Iowa Department of Public Health (IDPH) mandated that counties receiving state funds perform a needs assessment and develop a plan to improve the health of its residents. In 1990, Iowa's counties began submitting a health needs assessment and health improvement plan to IDPH every five years.

The importance of assessment in public health has been gaining traction since the Institute of Medicine declared assessment a core function of public health in its 1988 report *The Future of Public Health.* In 2003, the American Public Health Association affirmed that assessment is an essential service of public health. Currently, the Community Health Needs Assessment (CHNA) and Health Improvement Plan (HIP) process is in Iowa Administrative Code as a role of the local board of health. Local boards of health are charged with safeguarding the community's health by assuring the provision of the three core functions: assessment, policy development, and assurance. Community assessment and planning is also a component of the Iowa Public Health Standards[1] that are designed to assure consistency in the quality and services of the public health system. In many ways, Iowa has been pioneering in assessment and its role in public health.

The assessment process at its core encourages local public health providers to take stock of the health of their communities, assess the greatest needs, and strategize interventions and activities to address those needs in a health improvement plan. To make this assessment comprehensive and the subsequent planning robust, the process should include a community wide discussion with residents and stakeholders inside and outside of the health care field.

In the last 20 years, the approach to CHNA & HIP has evolved. In prior years, IDPH provided counties with data and a prescriptive reporting tool and template to follow in conducting their needs assessment and writing their health improvement plan. Along with this template, IDPH suggested specific data and indicators for counties to use in determining their health priorities.

The 2010-2011 CHNA & HIP process marks a significant change in methodology from years prior. In this installment of CHNA & HIP, IDPH provided more guidance than directive, allowing individual counties to determine the process and methodology that best met local needs.

The 2010-2011 CHNA & HIP process began with IDPH offering training and technical assistance to counties including data sources, various assessment tools, strategies, and information on assessment and planning elements. IDPH offered webinars and examples of real community health assessments in action on the IDPH website to facilitate counties capacity for assessment and planning. During the process, IDPH encouraged local public health agencies to collaborate with diverse stakeholders in conducting a comprehensive assessment of their community's health needs.

[1] For more information on the Iowa Public Health Standards please visit the website: http://www.idph.state.ia.us/mphi/

Counties were given the opportunity to collaborate and partner with one another and submit a combined needs assessment and plan. By the end of February, 2011, 97 counties submitted their CHNA & HIP and two counties[2] combined to submit one assessment and plan.

METHODOLOGY

The foundation for analysis of the 99 needs assessments and plans is the reporting tool designed by members of the CHNA & HIP oversight team within IDPH. The reporting tool[3] allowed counties to identify their needs under the umbrella of the six focus areas of public health in Iowa:

- Promote Healthy Behaviors (Healthy Behaviors)
- Prevent Injuries
- Prepare for, Respond to, and Recover from Public Health Emergencies (Emergency Response)
- Protect Against Environmental Hazards (Environmental Hazards)
- Prevent Epidemics and the Spread of Disease (Prevent Epidemics)
- Strengthen the Public Health Infrastructure (Health Infrastructure)

The IDPH focus areas are the framework for strategic planning in the department and all the activities of the individual programs working to promote and protect the health of Iowans at IDPH every day. These focus areas reflect "what public health does".

Using the focus areas within the reporting tool helps to standardize the assessments allowing for aggregation and cross county comparison but it also creates the potential for bias in identification. Specifically this bias might be reflected in whether or not a need was chosen; a county is more likely to identify a need in each focus area because of the reporting tool whether or not it might have been identified otherwise. While some counties identified needs in all six focus areas, a number of counties identified needs in only a few focus areas.

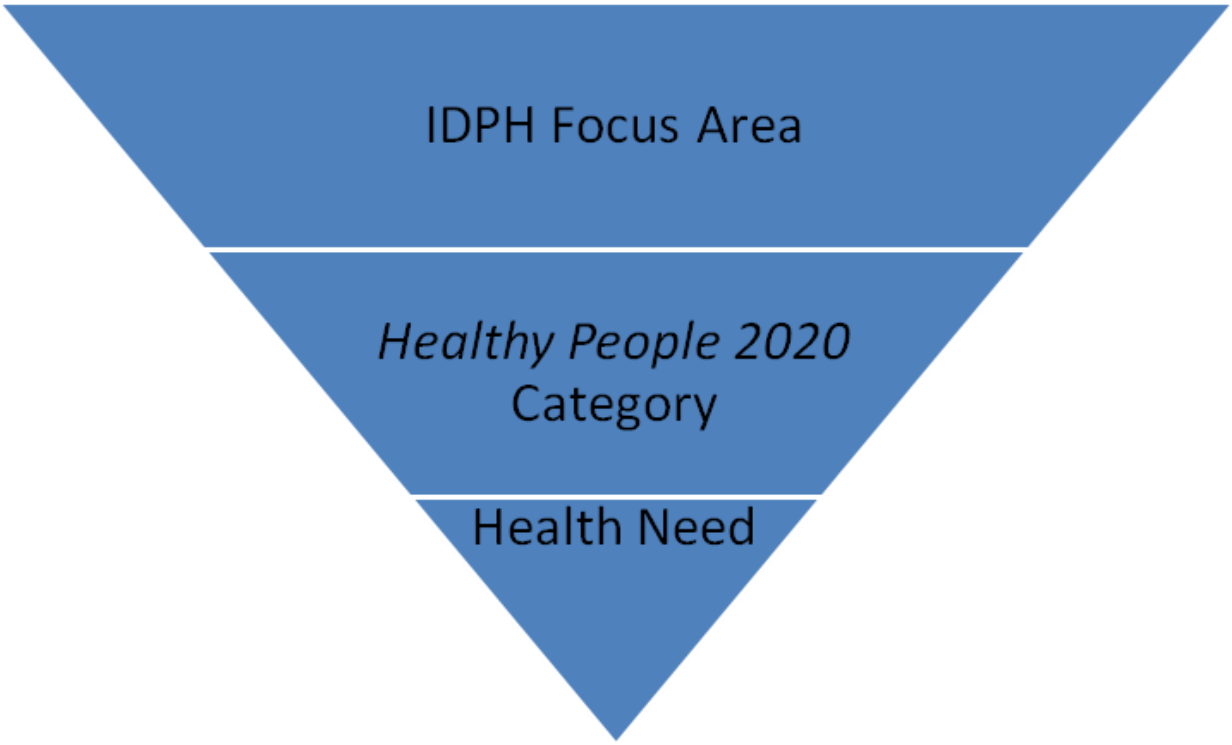
Prior to submitting their health needs using the reporting tool, counties were to comprehensively assess needs in each of the focus areas and detail the need using supporting data. The next step was to identify which needs local public health would address and include in their HIP. If a need was cited in the CHNA and not included in the HIP, the reporting tool provided a number of options to explain why it was omitted in the plan. Some of the reasons included lack of resources, lack of community support, lack of lead organization, as well as an "other" option.

Qualitative analysis of the 99 needs assessments and action plans began using the focus area as the top of the hierarchy of need classification. To avoid bias in the analysis, the classification allows the categories to emerge in the analysis rather than being defined by the analyst a priori, or prior to the analysis. The analysis creates the taxonomy of needs in addition to a typology of needs, creating

[2] Page and Montgomery Counties chose to submit a combined CHNA & HIP.
[3] The reporting tool is located in Appendix A.

multiple levels of needs such that substance abuse may be aggregated to its total incidence but also detailed by special populations it was identified with, such as adolescents. For consistency, the categories are matched with topics from *Healthy People 2020* and *Healthy Iowans*. Figure 2 illustrates the hierarchy of classification used in analysis.

Figure 2. Hierarchy of Needs Classification



This detailed analysis by focus area, *Healthy People 2020* category, and detailed needs allows for a more comprehensive picture of health needs across the state. The qualitative analysis also identifies overriding themes that cross all three classifications and emerging concerns or issues that may have been previously undetected. Gap analysis augments the health picture in Iowa by assessing the greatest needs that are unmet, defined as Iowa's most frequently cited needs that are not addressed in individual county's health improvement plans.

To enhance understanding of health needs, a peer group construct is used in analysis. This creates a basis for understanding which health needs are prominent in the state and which are more acute in areas with similar characteristics. Recognizing that there is vast disparity in health care access and populations across the state, the peer group analysis provides a benchmark for comparison. For instance, the needs of Adams County with less than 5,000 residents may mirror some of those in Polk County with over 425,000 residents however; there are issues that may be unique to each which would get lost in aggregation without a peer group focus.

General Findings

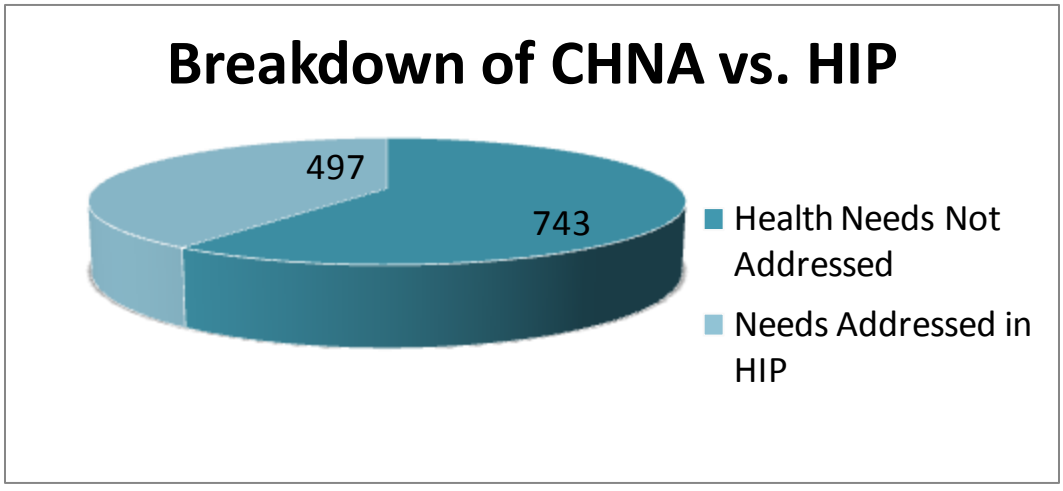
Characteristics

In the aggregate, Iowa's counties identified 1,240 needs and 497 of those needs are represented in a health improvement plan, with the remaining 60 percent of needs not addressed across the state. The median community health need assessment identified 11 needs and addressed four needs in the corresponding health improvement plan. The number of needs identified in the needs assessments did vary by peer group. Metropolitan counties, those with more than 50,000 residents, identified the most needs on average with approximately 20 needs per county. Rural counties, those with fewer than 10,000 residents, identified the fewest needs with 10.5 per county. The likelihood that a need isn't addressed varies little by county peer group. It is important to note that more urbanized counties have greater and more concentrated financial and human resources which can help explain why their needs assessments were more comprehensive, as defined by the number of needs cited.

In the needs assessments, counties identified a lack of financial resources in combination with at least one other factor as the most common reason for exclusion from the health improvement plan. This categorization accounted for 40 percent of needs not incorporated in an individual HIP. Frequently, counties cited multiple reasons including financial concerns, competing projects, lack of public support, lack of lead organization, and others. Almost 50 percent of the unaddressed needs were attributed to some combination of reasons.

Of the counties that identified only one reason a for a particular need not being addressed in their action plan, competing projects and priorities was the most frequent reason cited showing up in 25 percent of the responses. Nearly 13 percent of the responses identified their reasoning as "other" and almost 80 percent of this category was described as "Other organizational plan or ongoing project."

Figure 3. Community Health Needs Assessment Issues in Health Improvement Plan.



FOCUS AREAS

Although the reporting tool suggested that counties identify needs in all six focus areas, many counties identified needs in only some of the focus areas. The most frequently identified Focus Area was Healthy Behaviors, cited by all 99 counties. Health Infrastructure and Environmental Hazards were also strongly identified by counties, cited by 94 percent and 86 percent of counties, respectively. Table 2 illustrates the number of counties identifying a need within a focus area.

Table 2. Identification of Needs within Focus Area by Number of Counties and Percentage

	Counties Identifying In CHNA	Percentage of Counties (CHNA)	Counties Identifying in HIP	Percentage of Counties (HIP)
Healthy Behaviors	99	100.0%	90	90.9%
Prevent Injuries	78	78.8%	30	30.3%
Environmental Hazards	86	86.9%	31	31.3%
Prevent Epidemics	74	74.7%	26	26.3%
Emergency Response	70	70.7%	25	25.3%
Health Infrastructure	93	93.9%	50	50.5%

The majority of the needs emerging from the assessment fall under the focus area classification of Promoting Healthy Behaviors, accounting for nearly 36 percent of the total needs. Supporting the Public Health Infrastructure was the second most identified focus area with 19 percent of the total needs and the remaining four categories combining for roughly 44 percent of the 1,240 identified needs.

There is disparity in the share of needs by focus area and their corresponding representation in health improvement plans. While Healthy Behaviors accounts for 36 percent of the total needs identified by Iowa's counties, its share of issues in health improvement plans is approximately 51 percent. Of the six focus areas, Healthy Behaviors is the only focus area with a higher aggregate representation in the plans than in the overall needs identified.

It was also more likely that a Healthy Behaviors need was addressed in an individual plan than needs from other focus areas. The percentage of Healthy Behaviors needs addressed in an action plan leads all other focus areas at 57 percent. The remaining five focus areas needs were significantly less likely to be represented in health improvement plans, averaging 30 percent representation in the corresponding plans. Table 3 illustrates the variation between focus areas in their respective representations in the needs assessment and planning portion of CHNA & HIP.

Table 3. Needs and Action Items by Focus Area and Share of State Total

Focus Area	Focus Area Share of Statewide Needs	Focus Area Share of Statewide Needs Addressed	Percentage of Focus Areas Needs Addressed in Individual Plans
Healthy Behaviors	35.9%	51.1%	57.1%
Prevent Injuries	13.0%	8.9%	27.3%
Environmental Hazards	14.3%	10.9%	30.5%
Prevent Epidemics	9.3%	6.2%	27.0%
Emergency Response	8.5%	6.4%	30.2%
Health Infrastructure	19.0%	16.5%	34.7%

The classification in Table 3 represents the focus area chosen by the counties as they self-classified their issues. There is a strong tendency for an issue to cross focus areas and the focus area of Health Infrastructure consistently interacts with issues in the other five focus areas. For this reason, the tallies after analysis differ to some degree.

Using IDPH's definitions of the focus areas, needs were reclassified based on the fundamental focus area the need is associated with. As an example, if a county identified a need in Healthy Behaviors that relates to maternal and child health it might read, "Lack of labor and delivery services." The issue is related to both categories but because the county specified a lack of access to health services the issue falls under the Health Infrastructure category even though it was self classified in Healthy Behaviors[4]. If a county identified child abuse in Healthy Behaviors it was reclassified in the focus area of Prevent Injuries. Prenatal care, breastfeeding, and child wellness were the types of maternal and child health related needs that remain in the Healthy Behaviors classification. Table 4 shows the final number of issues by focus area in both CHNA and HIP after analysis.

Table 4. Final Classification of Needs and Action Items by Focus Area

Focus Area	County Classification CHNA	County Classification HIP	Analyst Classification CHNA	Analyst Classification HIP
Healthy Behaviors	445	254	400	238
Prevent Injuries	161	44	159	42
Environmental Hazards	177	54	172	55
Prevent Epidemics	115	31	125	36
Emergency Response	106	32	98	32
Health Infrastructure	236	82	286	94

[4] More information on the focus area definitions can be found in Appendix A. as well as on the IDPH website: www.idph.state.ia.us/WhatWeDo

HEALTHY PEOPLE 2020 CATEGORIES

Analysis of the 99 CHNA & HIPs identified approximately 17 broad categories. Where possible, these categories were identified by the category titles contained in *Healthy People 2020*[5] to ensure synergy between county, state, and national health assessment and planning.

The *Healthy People 2020* categories have some crossover, for example, Maternal, Infant, and Child Health contains all issues that deal with youth regardless of the potential match in other *Healthy People 2020* categories. Some of those issues are: youth substance abuse, youth mental health, access to maternal and child health services, and youth injury prevention.

It is important to note that not all of these categories are similar in scope and so they should not be used comparatively. For example, the Nutrition and Weight Status category only contains the issues of obesity, nutrition, and food access; whereas Environmental Health contains 13 different specific needs. Rather than a basis for comparison these categories are intended to give a sense of the breadth of an issue that the other categorizations may not convey.

The most identified *Healthy People 2020* category was Access to Health Services, with 92 counties identifying an issue in this category. The 10 most frequently cited categories are illustrated in Table 5. The 10 most frequently cited all meet the threshold of being identified by at least 40 percent of Iowa's counties.

Table 5. Ten Most Frequently Cited Healthy People 2020 Categories

Healthy People 2020 Category	**Number of Counties**	**IDPH Focus Area**
Access to Health Services	92	Health Infrastructure
Maternal, Infant, and Child Health	87	Healthy Behaviors
Environmental Health	83	Environmental Health
Injury and Violence Prevention	79	Prevent Injuries
Nutrition and Weight Status	77	Healthy Behaviors
Immunizations and Infectious Disease	72	Prevent Epidemics
Preparedness	66	Emergency Response
Mental Health and Mental Disorders	61	Healthy Behaviors
Substance Abuse	58	Healthy Behaviors
Chronic Disease	48	Healthy Behaviors

[5] A few categories deviate slightly from Healthy People 2020 category titles. In this analysis, all chronic diseases comprise the Chronic Disease category which is separated into many distinct topics such as Heart Disease, Dementias, and Respiratory Diseases in Healthy People 2020. Adolescent Health, a new topic area for the current installment of Healthy People is contained in the Maternal, Infant, and Child Health category in this analysis as few counties cited adolescent health separate from other youth groups. Family Planning which is a separate category in Healthy People 2020 is identified in Maternal, Infant, and Child Health as well. These classifications are largely due to the programmatic focus within IDPH in these topic areas.

Not only were the categories in Table 5 most commonly cited by Iowa's counties as needs but multiple issues were cited by many counties within each category. Counties that cited issues within Access to Health Services as needs cited on average, 2.27 issues within that category per assessment. The overall citation rate for all counties in Access to Health Services was 2.11. While Maternal, Infant, and Child Health was cited by fewer counties, ranking second, the counties that identified this category as an issue cited an average of 2.74 needs in this area per assessment. Injury prevention which ranked fourth in terms of the number of counties that identified related needs, ranked third in the number of issues cited by the respective counties with an average of 2.01 needs per assessment. Table 6 illustrates the prevalence of issues cited by category and their corresponding citation in Health Improvement Plans.

Table 6. Frequency of Issues Cited by Healthy People 2020 Category

Category Identified	Average Issues Identified in CHNA Submission	Average Issues Addressed in Corresponding HIPS	Average Needs Unaddressed
Access to Health Services	2.11	0.76	1.35
Maternal, Infant, and Child Health	2.41	1.15	1.26
Environmental Health	1.65	0.56	1.09
Injury and Violence Prevention	1.62	0.43	1.19
Nutrition and Weight Status	0.85	0.68	0.17
Immunizations and Infectious Disease	1.22	0.31	0.91
Emergency Response	1.00	0.33	0.67
Mental Health	0.93	0.47	0.46
Chronic Disease	0.66	0.34	0.32
Substance Abuse	0.78	0.50	0.28

The basic gap analysis in Table 6 shows the range of unaddressed needs ranges from .17 for Nutrition and Weight Status to 1.35 for Access to Health Services. As percentages of the total issues identified by category, the highest percentage of unaddressed issues is under Immunization and Infectious Disease (74.6 percent), followed by Injury Prevention (73.5 percent), Environmental Health (66.1 percent), and Access to Health Services (64 percent).

This analysis must be tempered with a caveat that the categories with the highest percentage of unaddressed needs are also the broadest categories. This is driven by a couple of factors: the reporting tool itself and the scope of the issue. The reporting tool guided counties to identify issues in the six focus areas and in doing so increased the likelihood that injury prevention, emergency response, immunization and infectious disease, and environmental health would be identified. This issue becomes more pronounced when you consider that obesity, while a widespread issue, has a smaller scope than the entire field of environmental health. This categorical analysis is offered as a baseline for understanding the subsequent analysis of detailed category levels and how these specific categories account for the gaps described in this section.

DETAILED NEEDS ANALYSIS

The comparison and ranking of needs from the CHNA & HIP process occurs at the detailed need level. This section details the multiple needs emerging within the focus areas and the *Healthy People 2020* category. This provides a basis for understanding Iowa's detailed health needs at the local level. The detailed needs totals will not add up to the *Healthy People 2020* category totals in most cases as many counties identified multiple needs and are only counted once in the *Healthy People 2020* category, while they are counted individually in the more detailed analysis.

ACCESS TO HEALTH SERVICES

As reported in the previous section, the category of Access to Health Services was the most commonly identified category of needs across the state. This category contains fourteen separate issues ranging from the most commonly cited, lack of transportation, to the least frequently cited, child care access.

More than 41 percent of Iowa's counties identified lack of transportation as a need making this one of the most prevalent needs in the state. Often this need was linked to the lack of providers in an area and the distances residents, particularly vulnerable populations such as the elderly or poor, are forced to travel due to shortages.

Following transportation, a lack of providers and services was frequently cited with mental health access demonstrating the greatest need as identified by 35 counties. Lack of providers and services was also cited in dental services, general services, and supplementary services for the elderly. Within dental services, many counties cited the absence of a dentist for the whole county and many more faced a limitation on those dentists that would accept new patients or Medicaid as payment for services. In services for the elderly, assistance for chores and care in the home were commonly cited needs by the counties.

Lack of insurance or being underinsured was the third most frequently cited need in Access to Health Services; identified by 23 counties. This was frequently mentioned in tandem with the affordability of health care services and economic barriers to health access, cited by 21 counties. Table 7 shows the most frequently cited needs within Access to Health Services.

Table 7. Category Detail for Access to Health Services

	Needs	Number of Counties	Percentage of Counties
Access to Health Services		92	92.9%
	Lack of Transportation	41	41.4%
	Lack of Mental Health Services/Providers	35	35.4%
	Lack of Insurance/Underinsured	23	23.2%
	Economic Barriers to Health Access	21	21.2%
	Lack of Dental Services/Providers	17	17.2%
	Lack of General Services/Providers	13	13.1%
	Lack of Services/Infrastructure-Elderly	11	11.1%

Maternal, Infant, and Child Health

The Maternal, Infant, and Child Health category comprises issues and needs from virtually all of the *Healthy People 2020* categories except for Chronic Disease. The number of counties citing a need in this category reflects the focus on youth consistent in the needs assessments. The 2010-2011 CHNA & HIP reports demonstrate considerable and consistent focus by Iowa's counties on child health within each of the six focus areas of IDPH, the *Healthy People 2020* categories, and in the strategies employed to address needs such as substance abuse and obesity.

The most commonly cited need was family planning with 29 Iowa counties identifying related issues and needs. Family planning needs largely concerned teen birth rates and subsequent educational and funding needs for counties. Fourteen counties cited prenatal care as a need and another 10 percent cited a lack of providers and services as a need. Needs relating to a lack of providers/services included roughly equal numbers of counties where no labor and delivery services are available and those facing a lack of services and providers because of cuts in funding for maternal and child health.

Six counties identified breastfeeding and parental education about child wellness as needs. Table 8 shows the detailed needs within the Maternal, Infant, and Child Health category.

Table 8. Category Detail for Maternal, Infant, and Child Health

	Needs	Number of Counties	Percentage of Counties
Maternal, Infant, and Child Health		87	41.4%
	Family Planning	29	29.3%
	Prenatal Care	14	14.1%
	Lack of Providers/Services	10	10.1%
	Breastfeeding	6	6.1%
	Parental Education-Child Wellness	6	6.1%

ENVIRONMENTAL HEALTH

Environmental health needs across the state are divided into general needs (subcategories) and detailed needs. For example, general water quality needs range from well testing and closure to wastewater systems and private septic use. The needs also cross over with the more general Healthy Homes subcategory which contains detailed needs related to septic systems, radon, lead, and air quality. The three primary categories of needs in environmental health across the state, as identified in the CHNA process, are Water Quality, Healthy Homes, and Lead Issues.

Counties frequently cite water quality concerns with either aging or decaying infrastructure and in certain communities there is a complete lack of infrastructure. A number of counties also identified storm water and wastewater issues as growing concerns. In total, 41 counties across the state identified water quality needs.

With the focus on water quality, the most frequently cited need in Healthy Homes was septic safety and function. The second greatest need was radon exposure, cited by 17 counties. Healthy Homes also includes a lead component containing the instances where lead abatement was cited as a need or when the housing stock was specifically mentioned in the CHNA as a justification for the need. The lead component of Healthy Homes is also identified under Lead Issues which primarily consists of childhood lead poisoning prevention and screening needs.

Thirteen of Iowa's counties identified food safety as a need. Food safety needs include education concerns, regulation, and surveillance of a food borne illness outbreak. The major needs in Environmental Health and their related components are listed in Table 9.

Table 9. Category Detail for Environmental Health

	Needs	Number of Counties	Percentage of Counties
Environmental Health		83	82.8%
	Food Safety	13	16.2%
	Healthy Homes	49	49.5%
	Healthy Homes-Radon	17	17.2%
	Lead Issues	39	39.4%
	Lead Poisoning and Screening	32	32.3%
	Healthy Homes-Lead	7	7.1%
	Water Quality	41	41.4%
	Drinking Water and Surface Water	24	24.2%
	Healthy Homes-Septic	18	18.2%
	Healthy Homes-Well Testing, Capping	8	8.1%

Injury and Violence Prevention

Injury and violence prevention is another complex category as it has two components: unintentional injuries and intentional or violent injuries. Within each of these components, multiple needs exist.

Counties identified more needs in preventing unintentional injuries than intentional injuries. Unintentional injury needs were primarily motor vehicle related, and the greatest need in motor vehicle accident prevention was preventing distracted driving. Falls were the second largest need within unintentional injuries and most counties that identified preventing falls as a need described the characteristics of their elderly population as justification.

Intentional injury prevention needs are fairly equally distributed in the number of counties identifying them. Prevention of child abuse was identified by the most counties at 23, followed by suicide prevention and domestic violence/sexual abuse identified by 22 and 18 counties respectively. Within suicide prevention, eight counties cited youth suicide as a need reflecting the focus on the younger population commonly cited throughout the county needs assessments.

Table 10. Category Detail for Injury and Violence Prevention

Needs	Number of Counties	Percentage of Counties
Injury and Violence Prevention	79	79.8%
Intentional Injuries	47	47.5%
Intentional Injuries-Child Abuse and Child Safety	23	23.2%
Intentional Injuries-Suicide	22	22.2%
Intentional Injuries-Domestic Violence and Sexual Abuse	18	18.2%
Unintentional Injuries	59	59.6%
Unintentional Injuries-Motor Vehicle Accidents	36	36.4%
Unintentional Injuries-MV Accidents-distracted driving	16	16.2%
Unintentional Injuries-Falls	16	16.2%

Nutrition and Weight Status

The Nutrition and Weight Status category contains only three needs; obesity and overweight, nutrition, and food access. Many counties identified obesity and nutrition together as a need citing concerns over the numbers of fruits and vegetables consumed by residents and its link to the percentage of people classified as overweight or obese. Only two counties cited nutrition without citing also obesity as a need.

While this category is not detailed by youth or adult population due to the manner that counties classified these needs, many of the counties cited the nutrition of their youth population in tandem

with their concerns for both adult and childhood obesity. Counties also acknowledged a link with general wellness and exercise; of the counties identifying a need in this category, 16 also identified wellness and exercise as a need comprising 84 percent of the responses in the Wellness and Exercise category.

Three counties identified food access as a concern linking the prevalence of obesity and overweight individuals to a lack of availability of nutritious food options rather than a choice to consume less nutritious foods. Table 11 illustrates the needs within the category of Nutrition and Weight Status.

Table 11. Category Detail for Nutrition and Weight Status

	Needs	Number of Counties	Percentage of Counties
Nutrition and Weight Status		77	77.8%
	Obesity and Overweight	74	74.7%
	Nutrition	7	7.1%
	Food Access	3	3.0%

IMMUNIZATIONS AND INFECTIOUS DISEASE

Following the categorizations within *Healthy People 2020*, immunizations and infectious disease are combined. Due to the range of issues, diseases, and population groups this category encompasses there are multiple needs represented across the state.

Within immunizations, the most common need was infant and youth immunizations with 23 counties identifying immunization of this population group as a need. General immunization issues were identified across a range of diseases including pertussis and influenza. Three counties cited immunization needs with respect to diverse populations of immigrants or minorities.

Within infectious disease, 31 counties identified needs in addressing sexually transmitted diseases or HIV. Although these categories are separated in *Healthy People 2020*; the majority of counties identifying these issues combined these two issues into one need in their health needs assessments.

Two other substantial needs within Infectious Disease that warrant mention are pandemic surge capacity and flu/pneumonia. Eleven counties cited needs relating to the ability to investigate, identify, and control an infectious disease pandemic. Most often, counties specifically identified issues in this area related to the human resource capacity to effectively manage a pandemic. Flu/pneumonia needs were identified by 10 counties across the state and included concerns about hospitalizations, mortality, and immunizations. Table 12 illustrates the breakdown of the Immunizations and Infectious Disease category.

Table 12. Category Detail for Immunizations and Infectious Disease

	Needs	Number of Counties	Percentage of Counties
Immunizations and Infectious Disease		72	71.7%
	Immunizations	40	40.4%
	Immunizations-Child	23	23.2%
	Immunizations-Multicultural Health	3	3.0%
	Infectious Disease	50	50.5%
	Infectious Disease-HIV/STD	31	31.3%
	Infectious Disease-Pandemic Surge Capacity	11	11.1%
	Infectious Disease-Flu/Pneumonia	10	10.1%

Emergency Response

The Emergency Response category details preparedness issues within Iowa's counties in responding to emergencies. Two-thirds of Iowa's counties identified needs in this category and the majority of those needs were related to infrastructure and human resources.

Communication, planning, and infrastructure needs range from implementing narrow band radios to having an established emergency response and communication plan. The majority of the 30 counties with this need focused on issues relating to the communication network, particularly their ability to meet requirements of converting to narrow band radios by the end of 2012.

Another strong need across the state is establishing a volunteer network and having the necessary staff to respond to an emergency situation. More than 20 percent of counties identified personnel issues as a need in their preparedness assessment.

Additional needs raised by the counties are a lack of preparedness on the part of residents and concerns about vulnerable populations; 19 and 12 counties cited these issues, respectively. Concerns about vulnerable and dependant populations included communication issues arising for non-English speakers to disabled or elderly populations that might be more dependent on public health for safety in an emergency situation. The detail for the Emergency Response category is available in Table 13.

Table 13. Category Detail for Emergency Response

	Needs	Number of Counties	Percentage of Counties
Emergency Response		66	66.7%
	Communication, Planning, & Infrastructure	30	30.3%
	Volunteers & Personnel	23	23.2%
	Residents Not Prepared	19	19.2%
	Vulnerable or Dependent Population	12	12.1%

Mental Health

The Mental Health category demonstrates needs across the state that cross several *Healthy People 2020* categories including Injury and Violence Prevention and Access to Health Services.

The most commonly cited need was a lack of providers or services in mental health, identified by 35 counties. A strong component of this issue was the need to educate the public about their mental health and identify services and interventions to improve the mental health of residents.

As a subpopulation, Iowa's counties put considerable focus on youth. Although only nine counties identified youth mental health as a separate need, many of the responses classified under general mental health and injury or violence prevention cited concerns about the youth population as well. Many counties identified a rising concern with bullying and its impact on adolescents' mental health. Table 14 illustrates the detailed needs within the Mental Health category.

Table 14. Category Detail for Mental Health

	Needs	Number of Counties	Percentage of Counties
Mental Health		**61**	**61.6%**
	Access to Mental Health Services	35	35.4%
	General Mental Health	25	25.3%
	Suicide Prevention	22	22.2%
	Youth Mental Health	9	9.1%

Substance Abuse

The category of Substance Abuse contains needs varying by type of substance and the age of the user. While 59 counties cited needs in the Substance Abuse category, the majority of these needs are attributed to the youth population.

The category of General Substance Abuse includes the counties that cited substance abuse broadly, regardless of age and substance, as well as those that cited general adult substance abuse issues. When counties cited the abuse of specific substances as a need in the adult population, alcohol was most common with six counties identifying needs in this area. Youth substance abuse contains most of the needs cited by counties and alcohol is the most common substance cited as a need. It is important to note that a few counties that listed general substance abuse included tobacco in their list of substances, but it was lumped together with prescription drugs, illicit drugs, alcohol, and other substances and therefore not classified under the separate category of Tobacco Use.

Substance abuse contains crossover with a number of the *Healthy People 2020* categories. Substance abuse was cited as a need in Access to Health Services with eight counties identifying a lack of providers and services for substance abuse treatment. Additionally, substance abuse

crossed into Injury and Violence Prevention with seven counties identifying needs in preventing motor vehicle accidents associated with substance abuse. Table 15 illustrates the most frequently cited needs within the Substance Abuse category.

Table 15. Category Detail for Substance Abuse

	Needs	Number of Counties	Percentage of Counties
Substance Abuse		58	58.6%
	General Substance Abuse	19	19.2%
	Youth Substance Abuse	32	32.3%
	Youth Substance Abuse-Alcohol	18	18.2%
	Youth Substance Abuse-All	13	13.1%
	Youth Substance Abuse-Drugs	3	3.0%

Chronic Disease

The Chronic Disease category contains many diseases and issues including asthma, heart disease and stroke, diabetes, chronic disease prevention, and dementias. The category also includes an educational and outreach component as counties identified needs in educating their residents about resources, screening, and risk factors.

The strongest need within Chronic Disease is heart disease and stroke, identified by 28 counties. Although heart disease and stroke are the leading cause of death in Iowa after cancer, only 28 percent of counties cited this as a need in their assessment of local health issues.

Diabetes was cited as an issue by 11 counties and often was identified as a separate issue from nutrition and weight status. Only one county citing a need related to diabetes failed to identify needs in the Nutrition and Weight Status category.

Other chronic disease needs were identified in respiratory diseases, including asthma and COPD, cited by nine counties; and dementias including Alzheimer's disease, cited by four counties. Table 16 illustrates the breakdown of needs in the category of Chronic Disease.

Table 16. Category Detail for Chronic Disease

	Needs	Number of Counties	Percentage of Counties
Chronic Disease		48	43.4%
	Heart Disease and Stroke	28	28.3%
	Diabetes	11	11.1%
	Chronic Disease Prevention	9	9.1%
	Respiratory Disease	9	9.1%
	Dementias, Including Alzheimer's Disease	4	4.0%

SUMMARY AND RANKING OF IOWA'S TOP HEALTH NEEDS

Analysis of the CHNA & HIP submissions at the detailed need level creates a clear picture of the most pervasive health issues in Iowa's counties. The *Healthy People 2020* categories help define the scope of the problems and their connectedness while the detailed analysis provides a baseline for assessing strategies and goals to meet the needs.

At the detailed need level, a number of issues that weren't prominent in the larger categorical analysis become evident. For example, cancer becomes a top five need while it wasn't prominent at the *Healthy People 2020* category level because its scope is more focused.

The following categories have the same title as a *Healthy People 2020* category and a need: Nutrition and Weight Status, Cancer, Tobacco, Social Determinants of Health, and Educational and Community Based Programs. These four categories have the same definitions in the categorical and detailed analysis because they meet criteria of specificity in focus and identification. Another way of understanding this specificity is the number of subordinate needs in these categories. Unlike the larger categories, with many subordinate needs, these four categories have few unique needs or issues.

Of the needs that emerge in the detailed analysis that weren't prominent in the *Healthy People 2020* categorical analysis, cancer is the most frequently cited with 35 counties identifying it as a need. Colorectal was the most frequently cited type of cancer identified by 12 counties. Almost half of the counties that identified cancer as a need identified cancer in the general sense rather than identifying a specific kind of cancer.

Another emergent need in the detailed analysis is educational and community based programs, identified by 32 counties and representing needs for community education and outreach across all six focus areas and many other *Healthy People 2020* categories. The most frequently cited issue in this area was the need for increasing knowledge of health resources available to residents, identified by 15 counties. Many counties indicated that residents and providers weren't aware of all resources available to them and that there wasn't a means of disseminating this information broadly.

Also emerging in the detailed analysis are needs in addressing the social determinants of health as well as tobacco, each identified by 27 counties. Social determinants needs in the county assessments include educational attainment of the residents, socioeconomic status, and vulnerable populations, particularly youth in at-risk situations. The youth focus in social determinants was linked primarily to poor parenting skills and poverty rates. Tobacco was identified in general by 23 counties and 4 counties specifically cited needs in youth tobacco prevention.

The detailed need analysis presents opportunities for comparison that the broad analysis doesn't. For example, inferring that environmental health is a greater need in Iowa than chronic disease given the number of counties identifying needs in general is not accurate. Using the detailed analysis, one can make a comparison between lead poisoning and heart disease and stroke. In this

instance, 32 counties cited lead poisoning and screening as a need while only 28 counties identified needs related to heart disease and stroke. Table 17 illustrates the detailed needs across Iowa, their corresponding focus area, and the number of counties identifying them as such.

Table 17. Needs by Prevalence

Detailed Need	Focus Area	Number of Counties	Percentage of Counties
Obesity and Overweight	Healthy Behaviors	74	74.7%
Access to Transportation	Health Infrastructure	41	41.4%
Water Quality	Environmental Health	41	41.4%
Motor Vehicle Accident Prevention	Prevent Injuries	36	36.4%
Access to Mental Health Services	Health Infrastructure	35	35.4%
Cancer	Healthy Behaviors	35	35.4%
Youth Substance Abuse	Healthy Behaviors	32	32.3%
Educational and Community Based Programs	Health Infrastructure	32	32.3%
Lead Poisoning and Screening	Environmental Health	32	32.3%
HIV/STD Prevention, Screening, and Treatment	Prevent Epidemics	31	31.3%
Emergency Response: Communication and Network	Emergency Response	30	30.3%
Family Planning	Healthy Behaviors	29	29.3%
Heart Disease and Stroke	Healthy Behaviors	28	28.3%
Social Determinants of Health	Health Infrastructure	27	27.3%
Tobacco	Healthy Behaviors	27	27.3%
General Mental Health	Healthy Behaviors	25	25.3%
Access to Health Insurance	Health Infrastructure	23	23.2%
Childhood Immunizations	Prevent Epidemics	23	23.2%
Child Abuse Prevention and Child Safety	Prevent Injuries	23	23.2%
Emergency Response: Volunteers and Personnel	Emergency Response	23	23.2%
Suicide Prevention	Injury Prevention	22	22.2%
Economic Barriers to Health Services	Health Infrastructure	21	21.2%

GAP ANALYSIS

The purpose of the gap analysis is to understand what needs exist across the state that aren't being met for the purpose of planning by all health related stakeholders. Following the reporting structure of findings, gap analysis is presented by focus area, *Healthy People 2020* category, and detailed need.

FOCUS AREA GAPS

As described in the findings section of this report, Healthy Behaviors is the most commonly cited focus area where counties identified needs and also has the highest share of needs addressed in the corresponding planning document. The focus areas with the lowest percentage of needs included in a health improvement plan are Prevent Injuries and Prevent Epidemics. This might imply that these focus areas have the greatest unmet need but further analysis suggests otherwise.

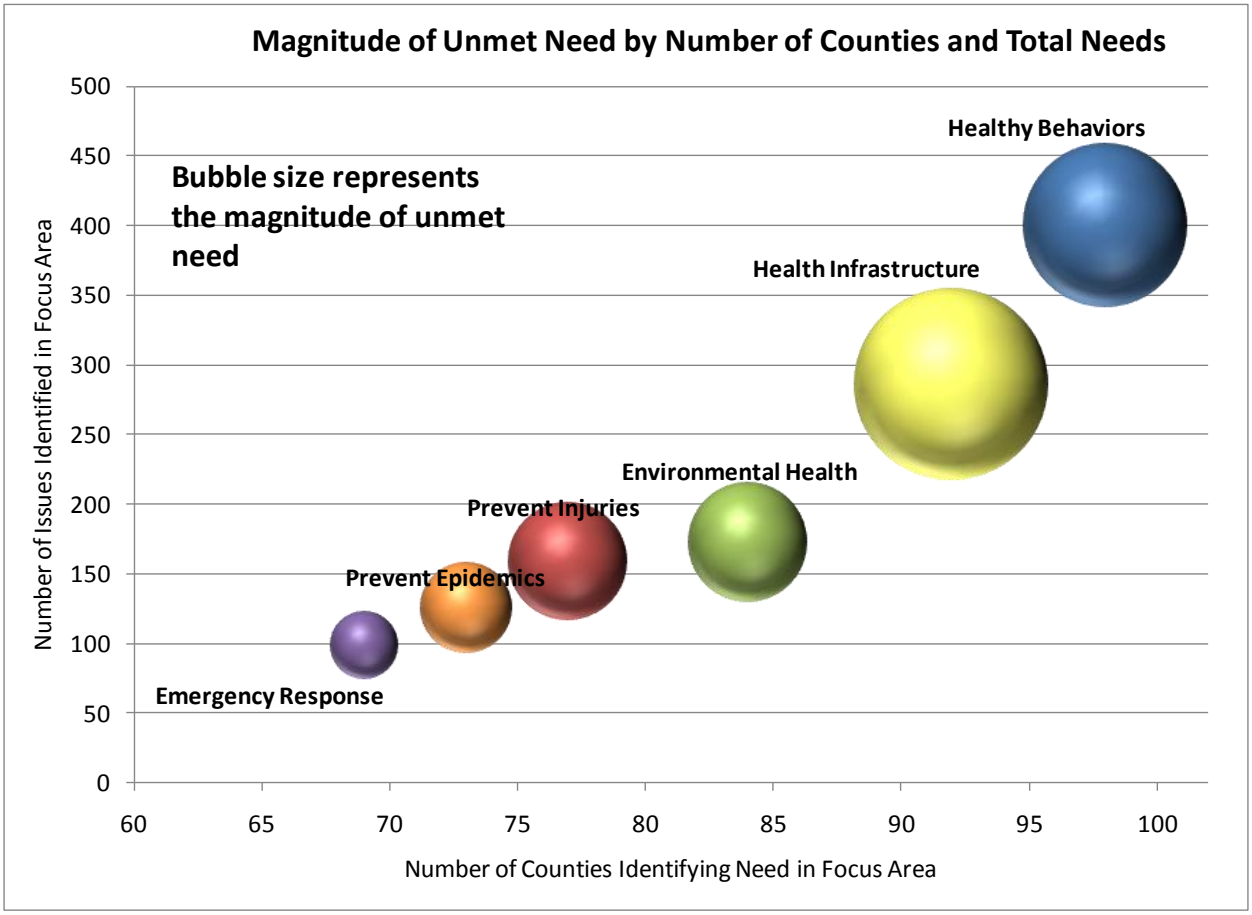
As Figure 4 illustrates, once the unmet need is weighted by the number of counties and the total issues identified with that area, the focus area with the greatest unmet need is Health Infrastructure followed by Healthy Behaviors. The figure demonstrates unmet need by the size of the bubble on the chart, the smaller the sphere the lesser the overall need. This is not to imply that certain issues within these focus areas don't incorporate substantial unmet need, simply that in the aggregate the overall needs are less.

There are a number of reasons why it might appear that there is a discrepancy in the unmet need by focus area when comparing table 1 from the findings section with Figure 3. One reason for this is simply a nuance of aggregation. If 20 responses are reported this doesn't tell the reader whether one issue may have 20 responses or five issues may have 20 responses in the aggregate. More specifically, if 40 counties identified a need in Emergency Response and the majority didn't address the need, this impact might be lessened by the fact that five other needs were identified by just as many counties and the majority did address them.

Another reason for the difference is that the number of issues varied substantially between the focus areas, as does the specificity. Health Infrastructure is a good example of this phenomenon given its intersection with all the focus areas and the range of issues contained within. Health Infrastructure contains needs like workforce recruitment and retention, social determinants of health, access to health services (for which there are nearly 20 individual categories), and myriad other issues.

While aggregation does have some nuances and must be viewed in the context of the entire analysis, it is a useful tool for understanding the types of needs across the state and plan for strategies and interventions that address the bigger picture.

Figure 4. Focus Area Unmet Need by Number of Counties and Total Issues



HEALTHY PEOPLE 2020 GAPS

The gaps in this section are identified more substantially with the number of counties than the number of issues being addressed, unlike the detailed category and focus area gap analysis.

In all but three of the *Healthy People 2020* categories, more than 50 percent of the counties identifying the category as a need didn't address a single issue within the category. At least one need in Nutrition and Weight Status is addressed by more counties than any other category. Almost 82 percent of the counties identifying this as a need also included it in their health improvement plan. More than 50 percent of the counties identifying needs in Substance Abuse and Maternal and Child Health addressed at least one need with representation in health improvement plans of 67 and 72 percent, respectively.

The three categories of needs with the fewest counties addressing them in their health improvement plans are Immunizations and Infectious Disease, Environmental Health, and

Emergency Response. Fewer than 40 percent of counties identified a need in each of these categories.

The middle cohort of categories, with at least one need addressed by more than 40 percent and less than 50 percent of counties includes the following categories; Injury and Violence prevention; Chronic Disease; Access to Health Services; and Mental Health.

When the needs are aggregated across all Iowa counties, not just the counties identifying them as a need, the greatest unmet need in the state is in the category of Environmental Health with more than 52 percent of needs unmet. Ranking closely behind is the category of Access to Health Services with more than 49 percent of needs unmet, and the categories of Injury and Violence Prevention and Immunizations and Infectious Disease. Table 18 illustrates the unmet needs by category and as a percentage of the number of counties identifying the need and the total number of Iowa counties.

Table 18. Broad Category/Healthy People 2020 Gaps and Unmet Needs

Healthy People 2020 Category	Number of Counties identifying Need	Number of Counties Including Need in HIP	Unmet Need as a Percentage of Counties Identifying	Statewide Unmet Need
Access to Health Services	92	43	53.3%	49.5%
Maternal, Infant, and Child Health	87	63	27.6%	24.2%
Environmental Health	83	31	62.7%	52.5%
Injury and Violence Prevention	79	32	59.5%	47.5%
Nutrition and Weight Status	77	63	18.2%	14.1%
Immunizations and Infectious Disease	72	26	63.9%	46.5%
Emergency Response	66	25	62.1%	41.4%
Mental Health	61	30	50.8%	31.3%
Substance Abuse	58	39	32.8%	19.2%
Chronic Disease	48	22	54.2%	26.3%

Detailed Needs Gaps

The detailed needs gap analysis presents specific issues that remain unaddressed around the state. This is important information for state agencies, researchers, and the Iowa Department of Public Health to have in planning activities because it might prevent redundancy and allow for the most efficient allocation of resources.

Obesity and overweight, a need in Nutrition and Weight Status, was by far the most commonly cited need across the state and this might imply that this is the greatest need Iowa faces, if not for the gap analysis. Obesity and overweight status is being addressed by local public health in 85 percent of Iowa's counties. This doesn't mean obesity is not a vital need and even with the plans there

remains statewide unmet need of 10 percent. However, it does demonstrate that the issue is receiving more attention than many others facing public health and impacting the health of Iowans.

Other issues with a relatively strong match between the needs identified and the plans to address them are youth substance abuse, and educational and community based programs. Both of these issues have unmet need of approximately 25 percent among the counties identifying them and statewide unmet need of about eight percent.

On the other end of the spectrum, motor vehicle accident prevention represents a major gap in the matching of needs and strategies. More than 83 percent counties are not addressing this need in their health improvement plans. Similarly, needs related to access to transportation and access to health insurance also demonstrate substantial unmet need with approximately 83 percent of counties not addressing either need. Table 19 illustrates the number of counties identifying specific needs and the number of counties addressing those needs in a health improvement plan.

The *Healthy People 2020* category associated with specific needs in Iowa's counties is presented in Table 17. The Access to Health Services category has three issues in the top four in terms of the largest percentage of unmet need. This helps explain the size of the Health Infrastructure bubble in Figure 3 from the focus area gap analysis.

Gap analysis does indicate a major problem in the meeting of needs in Iowa's counties with 16 of the top 22 issues across the state remaining unaddressed by more than 50 percent of counties. Additionally, half of these top 22 issues are going unaddressed by more than 60 percent of Iowa's counties.

The gap between needs and strategies across the state is substantial but the true magnitude of unmet needs is even larger. Because counties may not have identified all the needs that truly exist in their county and may have chosen those with the best data support or the ones most likely to gain public support, the number of needs not considered in this analysis is infinite. It is also likely that there is some selection bias in the needs chosen based on whether funding is available or whether the issue has widespread recognition due to the media. It is important to use the gap analysis along with the trends by peer group and specific health data for the individual counties and the state as a whole in planning which needs are the biggest priority and the most likely to become worse without intervention.

Table 19 shows the relationship between the detailed need, focus area, and the ranking of unmet needs across the state.

Table 19. Detailed Category Gaps and Unmet Needs

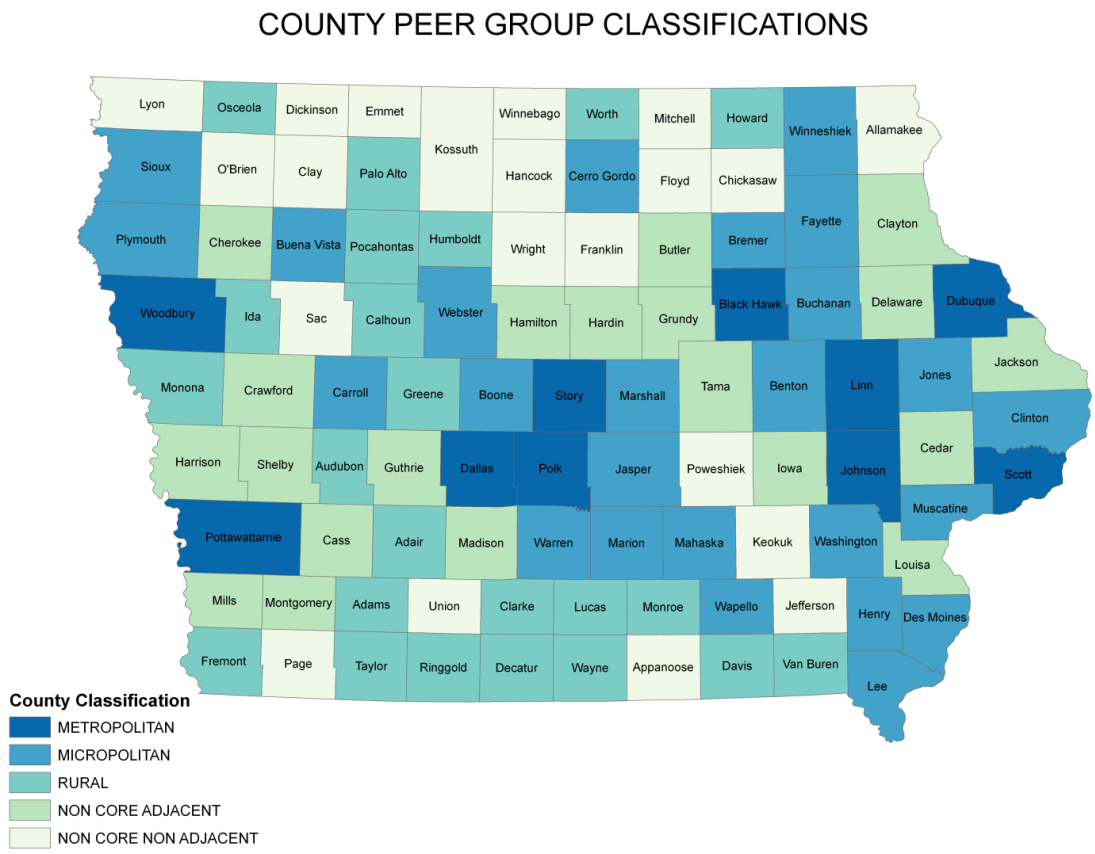
Need	Focus Area	Number of Counties Identifying Need	Number of Counties Including in HIP	Percentage of Identifying Counties with Unmet Need
Obesity and Overweight	Healthy Behaviors	74	63	14.9%
Access to Transportation	Health Infrastructure	41	7	82.9%
Water Quality	Environmental Health	41	10	75.6%
Motor Vehicle Accident Prevention	Prevent Injuries	36	6	83.3%
Access to Mental Health Services	Health Infrastructure	35	16	54.3%
Cancer	Healthy Behaviors	35	20	42.9%
Lead Poisoning and Screening	Environmental Health	32	14	56.3%
Youth Substance Abuse	Healthy Behaviors	32	24	25.0%
Educational and Community Based Programs	Health Infrastructure	32	24	25.0%
HIV/STD Prevention, Screening, and Treatment	Prevent Epidemics	31	8	74.2%
Emergency Response: Communication and Network	Emergency Response	30	10	66.7%
Family Planning	Healthy Behaviors	29	14	51.7%
Heart Disease and Stroke	Healthy Behaviors	28	12	57.1%
Social Determinants of Health	Health Infrastructure	27	8	70.4%
Tobacco	Healthy Behaviors	27	14	48.1%
General Mental Health	Healthy Behaviors	25	14	44.0%
Access to Health Insurance	Health Infrastructure	23	4	82.6%
Child Abuse Prevention and Child Safety	Prevent Injuries	23	7	69.6%
Childhood Immunizations	Prevent Epidemics	23	8	65.2%
Emergency Response: Volunteers and Personnel	Emergency Response	23	8	65.2%
Suicide Prevention	Prevent Injuries	22	9	59.1%
Economic Barriers to Health Services	Health Infrastructure	21	5	76.2%

PEER GROUP ANALYSIS

Iowa's 99 counties are divided into five peer groups based on urbanization and location, or adjacency to a metropolitan area. The classification of counties derives from a combination of the methodology of the Centers for Disease Control's National Center for Health Statistics and the Rural Urban Continuum Codes classification system dictated by the Economic Research Service of the United States Department of Agriculture. Those peer groups are defined as follows:

- Metropolitan Counties (Populations greater than 50,000)-10 counties.
- Micropolitan Counties (Populations between 20,000 and 49,999)-25 counties.
- Noncore Adjacent Counties (Total Populations between 10,000 and 19,999 and adjacent to a Metropolitan County)-20 counties.
- Noncore Non-Adjacent Counties (Total Populations between 10,000 and 19,999 and not adjacent to a Metropolitan County)-21 counties.
- Rural Counties (Populations under 10,000 regardless of adjacency)-23 counties.

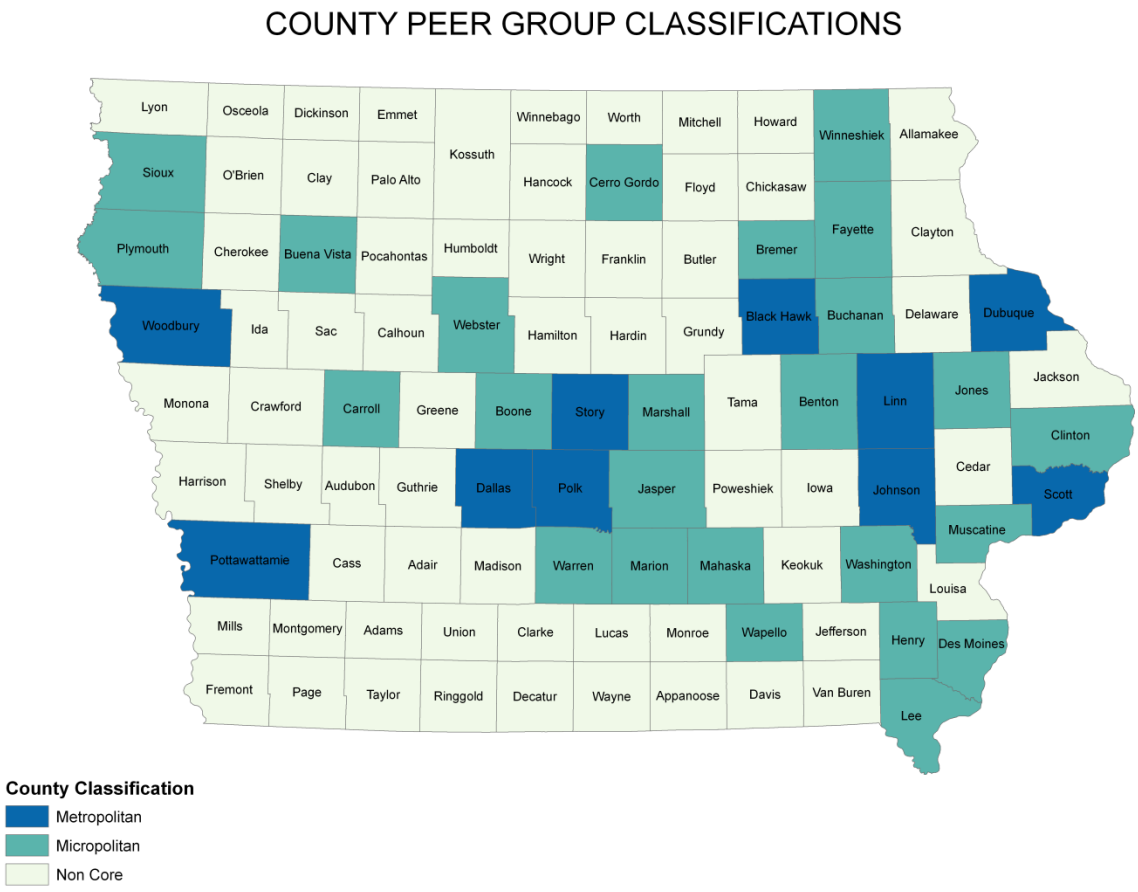
Figure 5. Map of Five Category County Peer Group Classification



Another peer group construct that is reported in this section is a compressed peer group categorization with three designations. This designation condenses rural counties and noncore counties, regardless of adjacency, into one noncore designation. This represents all counties with fewer than 20,000 residents. Individual counties designations under the three category classification are illustrated in Figure 6.

There are two peer group designations for a number of reasons. First, the three group designation is more concise and generally easier for stakeholders to identify with; however, it doesn't capture all information that the five peer group designation does. The five peer group designation captures significant trends in certain needs, particularly child abuse, where the transition from the most populated and dense counties to the most rural and isolated counties demonstrates consistent decline in the identification of child abuse as a need. This creates the opportunity for additional research and consideration that might get lost in the three group construct. Secondly, the five peer group designation has more relevance when socio-economic factors that affect health are considered. As an example, the economic base of counties is more comparable when adjacency and population are considered than when only population is considered. The five county peer group construct will be utilized in future reports and research, building upon this analysis.

Figure 6. Map of Three Category County Peer Group Designation



It is likely that many of the health needs identified in the CHNA & HIP process are more pervasive throughout the state than they are reported in the needs assessments due to self selection; however, the selection of a need in the assessment necessarily implies it is a recognized and therefore more vital need. This provides the basis for analysis of the distribution of needs by peer group. The reader is cautioned to consider that whether certain peer groups assessed their needs more comprehensively cannot be determined in this analysis, although it is a potential factor in the distribution of needs between peer groups. This analysis is a first approximation of the relative needs of different counties and this subject certainly would benefit from additional research and analysis.

Universal Needs

Analysis of the CHNA & HIP reports suggests that a number of needs are pervasive across the state, regardless of the size or the location of the county. The best example of this is obesity, identified by approximately 80 percent of metropolitan and micropolitan counties and 70 percent of all Noncore counties.

While no other issue was as dominant as obesity across the state and peer groups, most of the needs demonstrate consistency between counties regardless of their population. Table 20 presents a summary of needs with similar rankings regardless of peer group classification.

Table 20. Percent of Counties Identifying Needs by Three Category Peer Group Classification

Category/Need	Percent of Metropolitan Counties	Percent of Micropolitan Counties	Percent of All Noncore Counties (Includes last three columns)	Percent of Noncore Adjacent Counties	Percent of Noncore Non - Adjacent Counties	Percent of Rural Counties
Obesity and Overweight	80.0%	84.0%	70.3%	75.0%	61.9%	73.9%
Water Quality	50.0%	40.0%	40.6%	20.0%	61.9%	39.1%
Youth Substance Abuse	40.0%	40.0%	28.1%	15.0%	38.1%	30.4%
Childhood Immunization	30.0%	20.0%	23.4%	10.0%	33.3%	26.1%
Health Insurance	30.0%	20.0%	23.4%	30.0%	23.8%	17.4%
Lead Poisoning	30.0%	36.0%	31.3%	45.0%	14.3%	34.8%
Social Determinants	30.0%	24.0%	28.1%	25.0%	33.3%	26.1%

METROPOLITAN COUNTY NEEDS

Metropolitan counties identified three issues at a significantly higher rate than their less populated counterparts: Mental health, educational and community based programs, and child abuse and safety. Eighty percent of the metropolitan counties identified mental health as a need while identification of this need in the other four peer groups was on average, 20 percent. Another strong need in the metropolitan peer group is HIV/STD prevention and screening, cited by 50 percent of the counties in this peer group.

It is not surprising given that metropolitan counties account for 53 percent[6] of Iowa's residents living in poverty that economic barriers to health care access are more likely to be identified by Metropolitan counties in their needs assessments than the other peer groups. Forty percent of the Metropolitan peer group identified this as a need while only 16 percent of the Micropolitan peer group and 20 percent of all other counties identified this as a need.

Two issues largely cited by metropolitan and micropolitan counties are educational and community based programming as an outreach function and child abuse and safety. Only about 20 percent of their more rural counterparts cited educational and community based programming as a need.

The identification of child abuse and safety showed significant disparity by location of the county. metropolitan, micropolitan, and adjacent peer groups cited this category as a need in 60 percent, 32 percent, and 25 percent of the assessments, respectively. The non adjacent and rural peer groups had significantly lower percentages of identifying counties with 9.5 percent and 8.7 percent, respectively.

The stronger frequency of identification of these issues in more populated areas may be due to the social infrastructure and societal enforcement mechanisms that are less prevalent in more populated communities. This poses some opportunities for future research to guide strategies for addressing needs and interventions based on differing community structures.

Metropolitan counties also demonstrate less frequent identification in specific categories of needs. The two leading causes of death in Iowa are heart disease and cancer, yet only 10 percent of metropolitan counties identified these as needs. Suicide and motor vehicle accident prevention, cited frequently in the other peer groups, are only identified by 20 percent of the metropolitan peer group. Table 21 illustrates categories of needs where the metropolitan counties identification differed substantially from the other peer groups.

[6] This percentage is based on United States Census Bureau Poverty Estimates and the peer group construct used in this analysis.

Table 21. Metropolitan Peer Group Needs by Percentage of Counties

Category/Need	Percent of Metropolitan Counties	Percent of Micropolitan Counties	Percent of All Noncore Counties (Includes last three columns)	Percent of Noncore Adjacent Counties	Percent of Noncore Non - Adjacent Counties	Percent of Rural Counties
Mental Health	80.0%	16.0%	20.3%	35.0%	14.3%	13.0%
Child Abuse and Safety	60.0%	32.0%	14.1%	25.0%	9.5%	8.7%
HIV/STD Prevention	50.0%	44.0%	23.4%	25.0%	14.3%	30.4%
Economic Barriers	40.0%	16.0%	20.3%	25.0%	23.8%	13.0%
Motor Vehicle Accident Prevention	20.0%	36.0%	39.1%	25.0%	61.9%	30.4%
Suicide Prevention	20.0%	31.8%	20.3%	27.3%	18.2%	13.6%
Heart Disease & Stroke	10.0%	32.0%	29.7%	40.0%	14.3%	34.8%
Cancer	10.0%	40.0%	37.5%	35.0%	42.9%	34.8%

MICROPOLITAN COUNTY NEEDS

Like the metropolitan peer group, micropolitan counties identified educational and community based programs, child abuse and safety, and HIV/STD prevention and screening as needs more frequently than other peer groups, but to a lesser degree. Those percentages of identification are detailed in Table 19.

Micropolitan counties did show some deviation from the other peer groups in family planning. The micropolitan counties and the noncore adjacent counties exhibited the greatest percentages identifying this as a need at 44 and 45 percent, respectively.

On the other end of the spectrum, micropolitan counties identified a few needs at lower percentages than the other peer groups. Specifically, micropolitan peer groups identified mental health, tobacco, economic barriers, and personnel for emergency response at lower rates than the other peer groups. The lower citation of economic barriers to health care access is unexpected given the disproportionate toll on micropolitan counties in the 2007 recession. Table 22 details the needs with the highest and lowest response among micropolitan counties and the corresponding response rates of other peer groups.

Table 22. Micropolitan Peer Group Needs by Percentage of Counties

Category/Need	Percent of Metropolitan Counties	Percent of Micropolitan Counties	Percent of All Noncore Counties (Includes last three columns)	Percent of Noncore Adjacent Counties	Percent of Noncore Non - Adjacent Counties	Percent of Rural Counties
Family Planning	30.0%	44.0%	23.4%	45.0%	4.8%	21.7%
Mental Health	80.0%	16.0%	20.3%	35.0%	14.3%	13.0%
Tobacco	40.0%	16.0%	29.7%	50.0%	9.5%	30.4%
Economic Barriers	40.0%	16.0%	20.3%	25.0%	23.8%	13.0%
Emergency Response: Personnel	30.0%	16.0%	25.0%	40.0%	14.3%	21.7%

NONCORE COUNTY NEEDS

The noncore counties are classified two ways in this analysis. In the five peer group classification, the noncore counties are separated by adjacency and are separate from rural counties. In the three peer group classification, noncore counties *include* rural counties.

In a few of the categories there was substantial deviation in need identification between the five peer group classification and the condensed three peer group classification. Some of the marked differences in this noncore classification occur in categories detailed in the micropolitan and metropolitan needs sections. For example, child abuse and safety was significantly less likely to be identified by different categories of noncore counties. Child safety and abuse was cited as a need by only 8.7 percent of Iowa's rural counties. Educational and community based program needs are also substantially lower in the noncore counties regardless of whether the three or five peer group classification is utilized, exhibiting a citation rate about half of that in metropolitan and micropolitan counties.

Family planning and tobacco also exhibited lower rates of identification within different classifications of the noncore counties. Only 4.8 percent of noncore non adjacent counties identified family planning as a need and the total for all noncore counties lagged both of the other peer groups. The noncore non-adjacent counties also cited tobacco less frequently than all other peer groups.

The noncore adjacent and noncore non-adjacent counties cited a lack of transportation at a significantly higher rate than the other three peer groups, including those classified as rural. 60 percent of the adjacent and 40 percent of the non adjacent counties cited transportation as a need in their assessments.

Another substantial difference in citation rates for these counties is in motor vehicle accident prevention and water quality. Both of these needs were far more frequently cited by noncore non adjacent counties than the other peer groups.

Table 23 illustrates the differences in needs citation where the noncore peer groups deviate most substantially from the others.

Table 23. Noncore Peer Group Needs by Percentage of Counties

Category/Need	Percent of Metropolitan Counties	Percent of Micropolitan Counties	Percent of All Noncore Counties (Includes last three columns)	Percent of Noncore Adjacent Counties	Percent of Non Core Non-Adjacent Counties	Percent of Rural Counties
Motor Vehicle Accident Prevention	20.0%	36.0%	39.1%	25.0%	61.9%	30.4%
Water Quality	50.0%	40.0%	40.6%	20.0%	61.9%	39.1%
Lack of Transportation	30.0%	40.0%	43.8%	60.0%	42.9%	30.4%
Educational & Community Based Programs	50.0%	56.0%	20.3%	20.0%	14.3%	26.1%
Tobacco	40.0%	16.0%	29.7%	50.0%	9.5%	30.4%
Child Abuse and Safety	60.0%	32.0%	14.1%	25.0%	9.5%	8.7%
Family Planning	30.0%	44.0%	23.4%	45.0%	4.8%	21.7%

CONCLUSION

The CHNA & HIP reports supplied a wealth of information about the health needs of Iowa's communities that quantitative data or rankings cannot always convey. Many of the needs identified don't show up in a health report card, but are still an integral part of the health of Iowans.

Common themes emerged in the analysis of the needs assessments with some of the most prevalent including a concentration on youth in virtually all categories. The assessments also reflected a common theme in addressing health issues before they become chronic conditions or cause significant harm. The relatively infrequent citation of heart disease and cancer as needs coupled with the frequency of needs relating to obesity, nutrition, and education demonstrates this focus.

Another common theme and concern of local public health agencies across the state is the absence of a network to disseminate information about health resources available to residents. It seems that there is dispersed knowledge on what resources are available and this affects local public health agencies, providers, and residents. This was reflected in the citation of educational and community based programming which showed up in all focus areas.

In the many instances where needs aren't addressed in health improvement plans a common theme is the constraints on local public health whether financially, in personnel, or in building capacity and public support. The analysis points out many areas where informal infrastructure and social capital are needed across the state.

The CHNA & HIP analysis will become a part of the statewide health assessment and health improvement plan, *Healthy Iowans*, and will be matched, where possible, with the national health improvement plan, *Healthy People 2020.* The coordination of all of these planning efforts will be a major step in improving the practice of public health and promoting and protecting the health of Iowans.

This analysis is a first step in what will be an ongoing process. The CHNA & HIP team will be evaluating the outcomes of the process, the perceptions of the participants, and continually monitoring and evaluating how the process is affecting health outcomes or the practice of public health.

Many questions come out of this preliminary analysis that will require future research and consideration, and the answers to the questions may have positive and substantial impacts on the health of Iowans. Even though the CHNA & HIP reports are only produced every five years, the process continues as does the hard work of meeting the needs identified in the assessments.

APPENDIX A. REPORTING TOOL

The reporting tool was provided in Microsoft Excel format to allow counties a template to fill in, eliminating the need to create a needs assessment on their own. Each tab of the reporting tool contained the name of the focus area and examples of the types of needs that might be identified in that focus area. The examples were to guide the classification of needs not to dictate what was identified as a need. The description of each focus area included in the reporting tool is listed below.

Promote Healthy Behaviors Assessment

Includes topics such as addictive behaviors (tobacco, alcohol, drugs, gambling), chronic disease (mental health, cardiovascular disease, cancer, asthma, diabetes, arthritis, etc.), elderly wellness, family planning, infant, child & family health, nutrition, oral health, physical activity, pregnancy & birth, and wellness.

Prevent Injuries Assessment

Includes topics such as brain injury, disability, EMS trauma & system development, intentional injuries (violent & abusive behavior, suicide), occupational health & safety, and unintentional injuries (motor vehicle crashes, falls, poisoning, drowning, etc.).

Protect Against Environmental Hazards Assessment

Includes topics such as drinking water protection, food safety, hazardous materials, hazardous waste, healthy homes, lead poisoning, nuisances, onsite wastewater systems, radon, radiological health, and vector control.

Prevent Epidemics & the Spread of Disease Assessment

Includes topics such as disease investigation, control & surveillance, HIV/AIDS, immunization, reportable diseases, sexually transmitted diseases, and tuberculosis (TB).

Prepare for, Respond to, & Recover from Public Health Emergencies Assessment

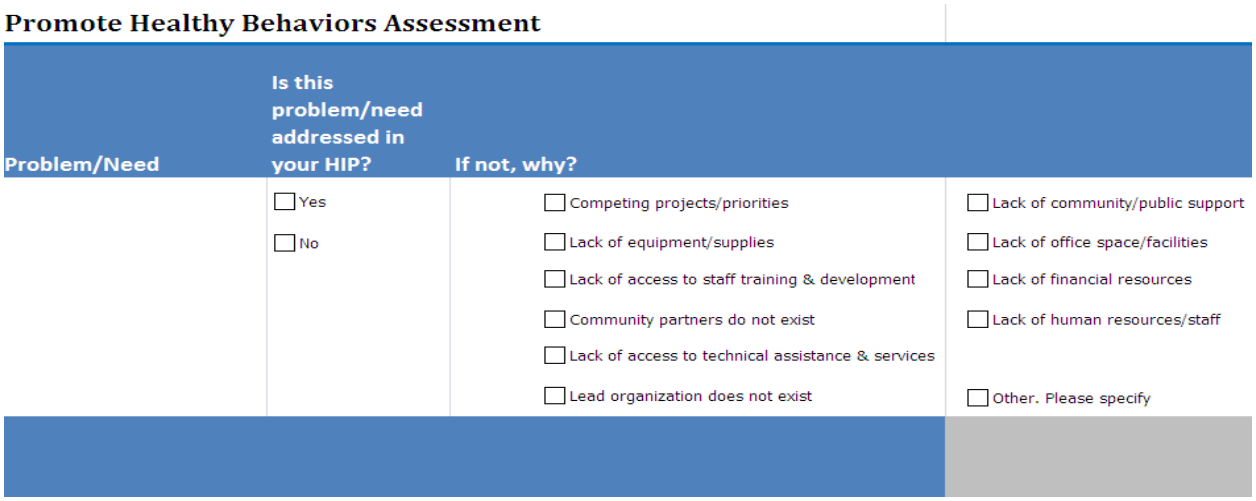
Includes topics such as communication networks, emergency planning, emergency response, recovery planning, risk communication, and surge capacity.

Strengthen the Public Health Infrastructure Assessment

Includes topics such as access to quality health services, community engagement, evaluation, health facilities, health insurance, medical care, organizational capacity, planning, quality improvement, social determinants (e.g., education & poverty levels), transportation, and workforce.

The tool provided up to 20 formatted spaces for needs identification in each of the six focus areas. An example of one space for identifying needs and reporting whether they are addressed, and if not why they weren't addressed, is given below.

Figure 7. Snapshot of the Reporting Tool



APPENDIX B. NEEDS BY FOCUS AREA

HEALTHY BEHAVIORS

Need	Number of Counties
Obesity and Overweight	**74**
Family Planning and Education	**29**
Mental Health	**25**
Heart Disease	**24**
Tobacco Use	**22**
Substance Abuse-All	**19**
Substance Abuse-Youth-Alcohol	**18**
Cancer	**17**
Educational and Community Based Programs-Resources	**15**
Prenatal Care and Education	**14**
Substance Abuse-Youth-All	**13**
Physical Activity	**13**
Cancer-Colorectal	**12**
Diabetes	**11**
Cancer-Breast	**9**
Chronic Disease Prevention (risk factors)	**9**
Mental Health- Youth	**9**
Educational and Community Based Programs-Healthy Behaviors	**8**
Asthma	**7**
Nutrition	**7**
Oral Health	**7**
Stroke Rate	**6**
Breastfeeding	**6**
Substance Abuse-Alcohol	**6**
Parental Education for Child Wellness	**6**
Alzheimer's Disease	**4**
Tobacco Use-Adolescent	**4**
Chronic Disease-General	**3**
Gambling	**3**
Substance Abuse-Drugs	**3**
Substance Abuse-Youth-Drugs	**3**
Cancer-Skin	**2**
Cancer-Cervical	**1**
Cancer-Lung	**1**
COPD	**1**
Educational and Community Based Programs-Adolescent	**1**

Prevent Injuries

Need	Number of Counties
Child Safety, Abuse and Parental Education	23
Domestic Violence and Sexual Abuse	18
Unintentional Injuries(Emergency room use and fatalities)	18
Motor Vehicle Accident Rate/Prevention	17
Falls	16
Motor Vehicle Accident Rate/Prevention-distracted driving	16
Suicide Awareness and Prevention-General	16
Suicide Awareness and Prevention-Youth	8
Farm safety	7
Motor Vehicle Accident Rate/Prevention-alcohol and drugs	7
Youth: Bullying and school safety	7
Boating and Water Safety	2
Elder Abuse	2
Motor Vehicle Accident Rate/Prevention-child safety	2

Environmental Health

Need	Number of Counties
Lead Poisoning and Screening	32
Water Quality-General Drinking and Surface Water	24
Air Quality	18
Healthy Housing-Water Quality-Septic-Physical Infrastructure	18
Healthy Housing Radon	17
Food Safety	13
Healthy Housing General	13
Educational and Community Based Programs- Hazardous Materials and Regulations	10
Hazardous Materials	9
Healthy Housing-Water Quality-Wells	8
Healthy Housing Lead	7
Pesticide Exposure	3
Healthy Housing Mold	2

Prevent Epidemics

Need	Number of Counties
Infectious Disease-STD and HIV	**31**
Immunizations-Child	**23**
Immunizations-General	**17**
Infectious Disease General	**11**
Infectious Disease-Pandemic Surge Capacity	**11**
Infectious Disease-Flu and Pneumonia	**10**
Educational and Community Based Programs-Infectious Disease	**7**
Immunizations-Multicultural Health	**3**
Infectious Disease-TB	**3**
Antibiotic Resistance	**1**

Emergency Response

Need	Number of Counties
Emergency Response-Network Infrastructure, Communication	**30**
Emergency Response-Personnel-Volunteers, Training	**23**
Emergency Response-Residents Not Prepared	**19**
Emergency Response-Dependent and Vulnerable Population	**12**
Emergency Response-Physical Infrastructure and Resources	**9**
Emergency Response-General	**3**
Emergency Response-Flood	**2**

HEALTH INFRASTRUCTURE

Need	Number of Counties
Access to Health Services-Lack of Transportation	41
Access to Health Services-Lack of Providers/Services-Mental Health	35
Access to Health Services-Uninsured and Underinsured	23
Access to Health Services- Economic Barriers	21
Access to Health Services-Lack of Providers/Services-Dental	17
Social Determinant-Poverty, Socioeconomic status	14
Access to Health Services-Lack of Providers/Services	13
Access to Health Services-Services/Infrastructure-Elderly	11
Access to Health Services-Infrastructure, System Issues	10
Access to Health Services-Lack of Providers/Services-Maternal and Child	10
Workforce Recruitment, Retention, and Succession	10
Access to Health Services-General	9
Physical Activity-Lack of Facilities and Programs	9
Access to Health Services-Lack of Providers/Services-Substance Abuse, Behavioral Health	8
Stakeholder and Provider Capacity/Social Capital	8
Quality Improvement, Modernization, and Accreditation	7
Social Determinant-Poor Parenting	7
Educational and Community Based Programs-Providers	6
Access to Health Services-Emergency Medical Services	5
Access to Health Services-Lack of Providers/Services-Direct Care	5
Social Determinant-Educational Attainment	5
Access to Child Care	3
Communication and Information Technology	3
Food Access	3
Social Determinant-Household Structure	3
Vulnerable Population-Disabilities	2
Workforce Cultural Competency	2